

## **TUNABLE TALBOT INTERFEROMETERS FOR FIBER BRAGG GRATING WRITING**

### **ABSTRACT**

A tunable interferometer for creating gratings of variable periodicity in an optical waveguide is disclosed. The interferometer includes a beam splitter for producing first and second write beams from an input beam. First and second reflectors receive the first and second write beams, respectively, from the beam splitter and direct the first and second write beams to intersect at a fixed location. The angle of intersection of the first and second write beams is a function of impingement locations of the first and second write beams on the first and second reflectors. The impingement locations of the first and second write beams on the first and second reflectors may be varied to vary the angle of intersection at the fixed location.